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10/591,234

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Kazushi Sato

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EXAMINER

LIU, LI

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,234	<b>Applicant(s)</b> SATO ET AL.	
	<b>Examiner</b> LI LIU	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/31/2006, 3/30/2007</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-13 are pending.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

3. The information disclosure statements (IDS) submitted on 08/31/2006 and 03/30/2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information referred to therein has been considered by the examiner.

#### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities:

Claim 1 recites “...**for performing a second quantization on data to be processed and obtained by performing ....**”. If applicant were to reword the claim to read “...for performing a second quantization on data to be processed, wherein the data to be processed is obtained by performing ....” or something similar it might help more accurately define the claimed invention.

#### ***Claim Rejections - 35 USC § 112, second paragraph***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 (and by dependence, all claims depending therefrom) is indefinite at least because claim 3 recites the limitation "the block data to be processed **or the block data around the block data**". It is unclear what does "the block data around the block data" means?

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima et al. (hereafter referred to as 'Nakajima', US 5657015).

Regarding claim 1, Nakajima discloses a data processing apparatus (**Fig. 1**) for performing a second quantization (**Fig. 1, numeral 6**) on data to be processed and obtained by performing inverse quantization (**Fig. 1, Inverse quantization unit 3**) after performing a first quantization by a first quantization scale (**Fig. 1, 2b contains pre-conversion quantization step information, i.e. first quantization scale**), comprising:

a quantization scale generation means for generating a second quantization scale based on the first quantization scale (**Fig. 1, quantization controller 5 receives input 11 which provide first quantization scale, and output Q, the second quantization scale**); and

a quantization means for performing the second quantization on the data to be processed based on the second quantization scale generated by the quantization scale generation means (**Fig. 1, the Quantizer 6**).

Regarding claim 2, Nakajima discloses a data processing apparatus as set forth in claim 1, wherein:

the quantization scale generation means generates the second quantization scale based on the first quantization scale for each of a plurality of block data composing image data as the data to be processed (**Fig. 2, and col. 4, lines 45-59,  $Q1m(n, i)$  is the first quantization step for frame “n”. “i” defines the number of a macro block, also see Figs. 10A and 10B**); and

the quantization means performs the second quantization on the block data based on the second quantization scale generated by the second quantization scale generation means in accordance with the block data (**Fig. 1, Quantizer 6, and also see Fig. 2, quantization step computation section 21 outputs the second quantization scale 22**).

Regarding claim 3, Nakajima discloses a data processing apparatus as set forth in claim 2, wherein the quantization scale generation means generates index data indicating a complexity degree of the block data to be processed (**Fig. 4 and from col. 9, line 43 to col. 10, line 6.  $A_m(n, i)$  is the estimated activity for clock “i”**) based on the first quantization scale used in the first quantization for obtaining the block data to be processed (**equation 13 shows  $A_m(n, i)$  as a function of first quantization scale  $Q1m(n, i)$** ) or the block data around the block data, and generates the second quantization scale of the block data to be processed based on the index data (**Fig. 4, unit 21**).

Regarding claims 11 and 13, the limitations of the claims are rejected for the same reasons as set forth in the rejection of claim 1 above.

Regarding claim 12, Nakajima discloses a coding apparatus (**Fig. 1**), comprising:  
a decoding means for generating decoding data (**Fig. 1, decoder 2**) by decoding coding data generated by performing coding on motion image data by a first coding method and obtained by performing first quantization based on a first quantization scale in the coding step (**col. 4, lines 1-13**);

a quantization scale generation means for generating a second quantization scale based on the first quantization scale (**Fig. 1, quantization controller 5, input 11 contains first quantization scale, output 22 provides second quantization scale**);  
and

a quantization means for performing second quantization on the decoding data (**Fig. 1, Quantizer 6**) based on the second quantization scale generated by the quantization scale generation means in a step of performing coding in a second coding method (**Fig. 1, coder 7**) which is different from the first coding method (**using different quantization step size**) on the decoding data generated by the decoding means (**the input data 3a to quantizer 6**).

***Allowable Subject Matter***

9. Claims 4-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action, and to include all of the limitations of the base claim and any intervening claims.

Claims 4-10 are not rejected over prior art. The following is a statement of reasons for the indication of allowable subject matter.

Prior art of record fails to teach, or render obvious, alone or in combination, claim 4 which specifically comprises the following features in combination with other recited limitations:

--- when two block data  $MBm(i)$  and  $MBm(i+1)$  respectively corresponding to **adjacent two block image positions in the vertical direction in the image data** are subjected to the first quantization based on the first quantization scales  $Qm(i)$  and  $Qm(i+1)$ , respectively, the quantization scale generation means calculates the second quantization scale  **$Q(i)$**  to be used when performing the second quantization on the block data  $MBm(i)$  **based on both of the first quantization scales  $Qm(i)$  and  $Qm(i+1)$**

**and the second quantization scale  $Q(i+1)$  to be used when performing the second quantization on the block data  $MBm(i+1)$ ;**

Claims 5-10 depend directly or indirectly on claim 3 and therefore they are analyzed in the same way.

The references listed in IDS: US 5657015 and US 2003/0067979, and references listed in PTO-892 forms are most relevant.

10. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Henocq; Xavier (US 20070053427 A1): method and device for selecting a transcoding method from a set of transcoding methods.

Sostawa; Bernd et al. (US 7106799 B1): digital transcoding system.

Nemiroff, Robert S. et al. (US 20050152449 A1): method and apparatus for processing a bitstream in a digital video transcoder.

Liu; Yu et al. (US 6714592 B1): picture information conversion method and apparatus.



Sato; Kazushi et al. (US 6687296 B1): apparatus and method for transforming picture information.

Hanamura; Tsuyoshi et al. (US 6587508 B1): apparatus, method and computer program product for transcoding a coded moving picture sequence.

Sato, Kazushi (US 20020136295 A1): code quantity control apparatus, code quantity control method and picture information transformation method.

Kim, Eung Tae (US 20020126752 A1): video transcoding apparatus.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI LIU whose telephone number is (571)270-5363. The examiner can normally be reached on Monday-Thursday, 7:00AM-4:30PM, ALT. Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed, can be reached on (571)272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624